

CLAIMS:

1. A cochlear implant device comprising an elongate member having at least one
5 electrode supported thereon, the elongate member comprising:
a first portion having a proximal end and a distal end, the first portion being
insertable into the implantee; and
at least one second portion having a proximal end and a distal end;
wherein, on or following insertion of the first portion, the second portion is at
10 least partially supported by the first portion;
and further wherein, during or after insertion of the first portion, the second
portion is movable relative to the first portion such that the distal end of the second
portion is moved away from the proximal end of the first portion.
- 15 2. The cochlear implant device of claim 1 wherein the first portion of the elongate
member is insertable into and supported by the wall of the cochlea.
3. The cochlear implant device of claim 1 wherein the first portion of the elongate
member is substantially straight.
- 20 4. The cochlear implant device of claim 1 wherein the first portion of the elongate
member comprises a substantially tubular member.
5. The cochlear implant device of claim 4 wherein at least part of the second
25 portion of the elongate member is supported within the first portion.
6. The cochlear implant device of claim 1 wherein the shape or configuration of
the first portion of the elongate member does not substantially change on or following
insertion of said first portion.
- 30 7. The cochlear implant device of claim 1 wherein the second portion of the
elongate member is preformed such that at least a region thereof extending back from
the distal end adopts a different configuration to that of the first portion during or after
insertion of the first portion of the elongate member.

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8. The cochlear implant device of claim 7 wherein said at least a region of the second portion adopts a curved configuration during or after insertion of the first portion of the elongate member.
- 5 9. The cochlear implant device of claim 4 wherein the diameter of the tubular member of the first portion decreases at least adjacent its distal end and wherein the diameter of the second portion increases at a predetermined location spaced from the distal end of the second portion to thereby provide a region of frictional engagement between said first and second portions of the elongate member.
- 10 10. The cochlear implant device of claim 1 wherein the second portion of the elongate member has a channel or reservoir for the delivery of at least one bioactive substance to the cochlea.
- 15 11. The cochlear implant device of claim 1 wherein said at least one electrode is provided on the second portion of the elongate member.
12. The cochlear implant device of claim 1 wherein said at least one electrode is provided on the first portion of the elongate member.
- 20 13. The cochlear implant device of claim 1 wherein one or more electrodes are provided on both the first portion and the second portion of the elongate member.
14. The cochlear implant device of claim 13 wherein the alignment of the electrodes on the second portion substantially matches that of the electrodes on the first portion.
- 25 15. An implantable tissue-stimulating device for an implantee comprising an elongate member having at least one electrode supported thereon, the elongate member comprising:
 - 30 a first portion having a proximal end and a distal end, the first portion being insertable into the implantee; and
 - at least one second portion having a proximal end and a distal end;
 - wherein, on or following insertion of the first portion, the second portion is at least partially supported by the first portion;
 - 35 and further wherein, during or after insertion of the first portion, the second portion is movable relative to the first portion such that the distal end of the second portion is moved away from the proximal end of the first portion.

16. The implantable tissue-stimulating device of claim 15 wherein the first portion of the elongate member is insertable into and is supported by the tissue of the implantee.
- 5 17. The implantable tissue-stimulating device of claim 15 wherein the first portion of the elongate member is substantially straight.
18. The implantable tissue-stimulating device of claim 15 wherein the first portion
10 of the elongate member comprises a substantially tubular member.
19. The implantable tissue-stimulating device of claim 18 wherein at least part of the second portion of the elongate member is supported within the first portion.
- 15 20. The implantable tissue-stimulating device of claim 15 wherein the shape or configuration of the first portion of the elongate member does not substantially change on or following insertion thereof.
21. The implantable tissue-stimulating device of claim 15 wherein the second
20 portion of the elongate member is preformed such that at least a region thereof extending back from the distal end adopts a different configuration to that of the first portion of the elongate member during or after insertion of said first portion of the elongate member.
- 25 22. The implantable tissue-stimulating device of claim 21 wherein said at least a region of the second portion of the elongate member adopts a curved configuration during or after insertion of the first portion of the elongate member.
- 30 23. The implantable tissue-stimulating device of claim 18 wherein the diameter of the tubular member of the first portion decreases at least adjacent its distal end and wherein the diameter of the second portion increases at a predetermined location spaced from the distal end of the second portion to thereby provide a region of frictional engagement between said first and second portions of the elongate member.

24. The implantable tissue-stimulating device of claim 15 wherein the second portion of the elongate member has a channel or reservoir for the delivery of at least one bioactive substance to the implantee.
- 5 25. The implantable tissue-stimulating device of claim 15 wherein said at least one electrode is provided on the second portion of the elongate member.
26. The implantable tissue-stimulating device of claim 15 wherein said at least one electrode is provided on the first portion of the elongate member.
- 10 27. The implantable tissue-stimulating device of claim 15 wherein one or more electrodes are provided on both the first portion and the second portion of the elongate member.
- 15 28. The implantable tissue-stimulating device of claim 27 wherein the alignment of the electrodes on the second portion substantially matches that of the electrodes on the first portion.
- 20 29. A support member for a cochlear implant comprising a first portion having a proximal end, a distal end and a receiving means to receive at least a portion of a second tissue stimulating portion, wherein the first portion is insertable into the cochlea of the implantee, and further wherein the first portion supports said second portion during advancement of the second portion into a cochlea.
- 25 30. The support member of claim 29 wherein said first portion is a substantially tubular member and wherein said receiving means comprises a lumen of said tubular member.
- 30 31. The support member of claim 29 wherein the first portion has at least one electrode positioned thereon.
32. The support member of claim 29 wherein the first portion is non-tissue stimulating.
- 35 33. A method of implanting a cochlear implant device in an implantee, said device comprising an elongate member having at least one electrode supported thereon, the

elongate member comprising a first portion having a proximal end and a distal end, said first portion at least partially supporting at least one second portion during or after insertion of said first member, said second portion having a proximal end and a distal end, the second portion being movable relative to the first portion such that the distal end of the second portion is moved away from the proximal end of the first portion, the method comprising:

- forming a cochleostomy in the implantee;
- inserting the first portion of the device through the cochleostomy and into the cochlea; and
- deploying the second portion of the device forwardly from the first portion and further into the cochlea.

34. A method of implanting a tissue-stimulating device in an implantee, said device comprising an elongate member having at least one electrode supported thereon, the elongate member comprising a first portion having a proximal end and a distal end, said first portion at least partially supporting at least one second portion during or after insertion of said first member, said second portion having a proximal end and a distal end, the second portion being movable relative to the first portion such that the distal end of the second portion is moved away from the proximal end of the first portion, the method comprising:

- (a) forming an ostomy in the implantee;
- (b) inserting the first portion of the elongate member through the ostomy and into the implantee;
- (c) deploying the second portion of the device forwardly from the first portion and further into the implantee.

35. The method of claim 33 wherein the first portion is positioned such that its proximal end is at or adjacent to, the cochleostomy and its distal end is relatively close to the first basal turn of the cochlea.

36. The method of claim 33 wherein the second portion of the device is supported by the first portion during insertion of the first portion into the implantee and wherein once the first portion is in a desired position, the second portion is deployed.

37. The method of claim 36 wherein the second portion is deployed relatively quickly after insertion of the first portion and during the same surgical procedure.

38. The method of claim 33 wherein as the second portion of the elongate member is deployed, at least a region adjacent the distal end of said second portion adopts a substantially curved configuration.

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39. The method of claim 38 wherein said curved region of the second portion substantially conforms with the modiolar wall of the cochlea.

40. A method of implanting a support member for a cochlear implant in an
10 implantee, the support member comprising a first portion having a proximal end, distal end and a receiving means to receive at least a portion of a second tissue stimulating portion, said method comprising:

forming a cochleostomy in the implantee; and
inserting the first portion of the device through the cochleostomy such that
15 at least a length of said first portion extends into the cochlea of the
implantee.